



May 2, 2017

BY ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Re: NOTICE OF EX PARTE

GN Docket No. 14-177: *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services;*

IB Docket No. 15-256: *Establishing a More Flexible Framework to Facilitate Satellite Operations in the 27.5-28.35 GHz and 37.5-40 GHz Bands;*

IB Docket No. 97-95: *Allocation and Designation of Spectrum for Fixed-Satellite Services in the 37.5-38.5 GHz, 40.5-41.5 GHz and 48.2-50.2 GHz Frequency Bands; Allocation of Spectrum to Upgrade Fixed and Mobile Allocations in the 40.5-42.5 GHz Frequency Band; Allocation of Spectrum in the 46.9-47.0 GHz Frequency Band for Wireless Services; and Allocation of Spectrum in the 37.0-38.0 GHz and 40.0-40.5 GHz for Government Operations.*

Ms. Dortch,

Competitive Carriers Association (“CCA”)¹ writes to oppose the Satellite Broadband Operators (“Satellite Operators”) proposals² to relax rules adopted in the Spectrum Frontiers Report and Order designed to protect terrestrial mobile use of LMDS spectrum. Satellite Operators tout prospective benefits to rural America, but competitive carriers are already using this spectrum to bridge the digital divide throughout their rural and regional service footprints. Competitive carriers also are investing in engineering solutions to optimize LMDS spectrum use. These carriers should

¹ CCA is the nation’s leading association for competitive wireless providers and stakeholders across the United States. CCA’s membership includes nearly 100 competitive wireless providers ranging from small, rural carriers serving fewer than 5,000 customers to regional and national providers serving millions of customers. CCA also represents approximately 200 associate members including vendors and suppliers that provide products and services throughout the mobile communications supply chain.

² See Letter from Petra A. Vorwig, Senior Legal and Regulatory Counsel, SES Americom, Inc., to Marlene H. Dortch, Secretary, FCC, GN Docket No. 14-177, *et al.* (filed April 14, 2017) (“Satellite Broadband Operators Ex Parte”); see also Comments of Competitive Carriers Association, IBFS FILE NO. SAT-LOA-20160622-00058 (filed Dec. 1, 2016) (opposing Boeing’s application to operate a non-geostationary satellite orbit (“NGSO”) fixed satellite service (“FSS”) system in the 37.5-42 GHz, 47.2-50.2 GHz and 50.4-51.4 GHz bands and alter rules properly addressed in the *Spectrum Frontiers* proceeding).

not be hamstrung by satellite operations to introduce mobile services on those same frequencies, and their activities merit the Commission's support.³ When drafting or revisiting high-band spectrum rules and policy, the Commission should not overlook incumbent operations and investment in non-urban areas. In fact, the Commission should encourage broader rural use of the 28 GHz spectrum band by maintaining the satellite operation rules adopted in the Spectrum Frontiers Report and Order.⁴

LMDS licensees' rights are already under assault. In the Spectrum Frontiers Report and Order, the Commission decided to subdivide LMDS licenses and establish new buildout requirements for each new license.⁵ As CCA explained in our Petition for Reconsideration, this policy will harm competitive carriers serving rural areas by creating significant unexpected buildout costs and jeopardizing competitive carriers' ability to retain their LMDS licenses.⁶ Competitive carriers who have fulfilled their LMDS buildout requirements operating in rural areas, where it may not currently make economic sense to buildout to all corners of an existing LMDS license area, should be allowed to reap the full benefit of their investment. As new devices and technologies come to market, these rural areas would undoubtedly benefit the most from mobile connectivity.

I. Competitive Carriers Are Using LMDS Spectrum to Bridge the Digital Divide

In today's mobile world, regional and rural carriers use LMDS spectrum for point-to-point services, but also view this spectrum as essential to future network expansion. Increased satellite activity in these bands will frustrate current licensees and would likely have a deleterious effect on competitive carriers' progress toward using LMDS spectrum for fixed mobile networks and other next generation uses.

Pine Belt Communications ("Pine Belt"), HTC ("Horry") and the Central Texas Telephone Cooperative ("Central Texas"), for example, purchased LMDS licenses at auction in the late 1990s, and have met the necessary buildout requirements despite many licensees that didn't. These carriers poured capital into building networks using 28 GHz spectrum to support point-to-point wireless backhaul for local businesses, schools, and other community institutions. Central Texas, for example, uses LMDS spectrum for a point-to-point link to provide wireless broadband services for Internet, Voice over Internet Protocol ("VoIP"), and other applications to support daily business

³ The Commission should also seek proof of concept regarding satellite providers' plans to provide mobile broadband to rural America.

⁴ *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services et al.*, GN Docket No. 14-177 *et al.*, Report and Order and Further Notice of Proposed Rulemaking, FCC 16-89 (WTB 2016) ("Spectrum Frontiers Report and Order").

⁵ In the Spectrum Frontiers Report and Order, the Commission adopted counties as the license size for Upper Microwave Flexible User Service ("UMFUS") licenses in the 28 GHz band, which is currently licensed by BTA, and adopted PEAs for 39 GHz licenses, which are currently licensed by EA. *See* Spectrum Frontiers Report and Order ¶¶ 35, 82.

⁶ Petition for Reconsideration of Competitive Carriers Association, GN Docket No. 14-177, *et al.*, at 9-10 (filed Dec. 14, 2016).

activities for approximately 35 bank managers and staff members of the Mills County State Bank as well as members of the public visiting the bank. Central Texas also uses LMDS licenses to support service to Goldthwaite High School, Middle School and Elementary School campuses in Goldthwaite, Texas, as well as to provide broadband service to the Mills County Court House and various Mills County municipal offices. Horry uses its 28 GHz spectrum for fixed point-to-point links in and around Conway, South Carolina. Pine Belt's LMDS spectrum provides point-to-point links for backhaul for fixed wireless internet access services to the Dallas County Courthouse in Selma, Alabama and to businesses in Demopolis, Alabama.

Soon, however, equipment will be available to use 28 GHz spectrum for wireless networks.⁷ LMDS spectrum will be among the first to support 5G networks, which is why the largest carriers are aggressively moving to acquire this valuable resource on the secondary market.⁸ There has been significant development of mobile terrestrial technology at 28 GHz, more than any other millimeter wave band, and carriers are expected to begin to deploy mobile wireless networks in the band soon. Competitive carriers are playing a role in the final push toward next-generation LMDS spectrum use. C Spire, for example, currently uses 28 GHz spectrum throughout Mississippi, and is testing equipment which would allow for fixed wireless use. Overall, C Spire has invested substantial resources in testing, research and equipment trials to pave the way for future 5G services over its spectrum assets, including LMDS spectrum.⁹ These carriers should be rewarded, not punished, for their efforts, investment, risk and determination to construct and deploy on 28 GHz spectrum, as it provides significant benefits to Americans living in non-urban areas.

Satellite Operators should not be permitted to claim at this stage greater latitude to interfere with mobile operations, especially not based on a tenuous theory that satellite mobile services will address service gaps in rural America. Competitive carriers purchased LMDS spectrum long ago, well aware that years could pass before the spectrum matured into a viable mobile services conduit. The Commission would be remiss to undermine competitive carriers' careful planning and investment just as true mobile LMDS use cases are developing, which competitive carriers can eventually apply to serve rural communities.

⁷ See, e.g., Karl Bode, Charter Conducting 28 GHz Band 5G Wireless Trials in Florida, DSL REPORTS (Apr. 10, 2017), <http://www.dslreports.com/shownews/Charter-Conducting-28-GHz-Band-5G-Wireless-Trials-in-Florida-139325>; see also TELECOMSTECH, Ericsson and SoftBank to conduct 5G trials on 28GHz spectrum (Mar. 27, 2017), <https://www.telecomstechnews.com/news/2017/mar/27/ericsson-and-softbank-conduct-5g-trials-28ghz-spectrum/>.

⁸ See, e.g., Scott Moritz, AT&T Buys Straight Path in \$1.6 Billion Deal for 5G Arsenal, BLOOMBERG (Apr. 10, 2017), <https://www.bloomberg.com/news/articles/2017-04-10/at-t-to-acquire-straight-path-in-deal-valued-at-1-6-billion>; see also Patrick S. Campbell, FCC Approves Spectrum Lease Arrangement between Verizon, XO Communications, LEXOLOGY (July 29, 2016), <http://www.lexology.com/library/detail.aspx?g=dbc62a49-0b99-4ad3-93f2-fe081ca840ac>.

⁹ C SPIRE, https://www.cspire.com/company_info/about/news_detail.jsp?entryId=26700006.

II. Satellite Operators Proposals Threaten Possible Terrestrial Mobile Operations

As described above, competitive carriers are creatively using LMDS to serve rural areas and are investing to optimize its use. Adopting Satellite Operators proposals could threaten investment and development of fixed mobile networks running on valuable LMDS spectrum. The purpose of the Spectrum Frontiers proceeding is to make high-band spectrum available for terrestrial mobile networks. In an attempt to promote the highest use of the spectrum, the Commission permitted limited satellite use of the spectrum in ways that will not impede mobile wireless use. The Satellite Operators threaten to disrupt that careful balance by tipping the scales away from terrestrial mobile use in a way that will make it unattractive to invest in and deploy mobile networks in the band.

Satellite Operators have asked the Commission to revisit certain aspects of the Spectrum Frontiers Report and Order including fixed satellite service (“FSS”) operating limits within LMDS spectrum and restricting the number of earth stations that may be deployed in a LMDS service area.¹⁰ Additionally, Satellite Operators are asking the Commission to relax rules adopted in the Spectrum Frontiers Report in Order in favor of a tiered system under which the permitted interference zone could encompass up to 10% of the population in a 28 GHz county license area with 6,000 or fewer people, and a protection zone could include up to 5% of the population in a 37/39 GHz PEA license area with less than 60,000 people.¹¹ Satellite Operators also are asking the Commission to allow more than three earth stations per license area.¹²

The Satellite Operators’ arguments rest on the premise that satellite is better positioned in all cases to serve rural areas. Decades of wireless service to rural communities prove this is not true. CCA members already are providing, and will continue to provide wireless services in rural areas. And, millimeter wave bands will make it easier and less expensive for rural carriers to deploy. Moreover, dedicating significant bandwidth to serve targeted rural areas, which are already being served by wireless carriers, equates to poor spectrum management. As a matter of scale, Satellite Operators’ proposal could harm rural areas. For example, allowing FSS operations to inflict interference up to 10% of a population in a rural county would likely cover most of that county, severely encumbering a competitive carrier’s operational scope. The technical record in this proceeding amplifies that satellite activity may cause significant interference to next generation technology and services.

¹⁰ Under the Spectrum Frontiers Report and Order, for FSS operations in the 27.5-28.35 GHz band, the “permitted interference zone” surrounding an earth station (together with any preexisting earth stations in the county) may cover no more than 0.1 percent of the population. *See* Spectrum Frontiers Report and Order ¶ 54. For operations in the 37.5-40 GHz band, the satellite licensee may establish a “protection zone” provided it covers less than 0.1 percent of the population of the PEA where the earth station is located. *See also id.* ¶ 93. For both 28 and 37/39 GHz bands, only three earth stations may be deployed per license area. *Id.* ¶¶ 54, 93.

¹¹ Satellite Broadband Operators Ex Parte at 5.

¹² *Id.* at 6.

III. The Commission Should Grant CCA's Other Requests Highlighted in Its Petition for Reconsideration

Given the rapid progress toward next-generation network deployment since the release of the Spectrum Frontiers Report and Order, the Commission should act promptly on CCA's Petition for Reconsideration. To encourage investment and correct a glaring allocation disparity between licensed and unlicensed spectrum, CCA asked the Commission to make available more mmW spectrum from exclusive wireless licensed use. In addition, the sharing regime for the 37-37.6 GHz band will reduce incentives to use that spectrum, and an operability requirement across the 37/39 GHz band is premature considering the technology necessary to deploy in those bands remains relatively new. CCA seeks reconsideration of both requirements. Last, CCA asks the Commission to remove the cybersecurity disclosure requirements, especially considering Chairman Pai has since acknowledged that adopting this requirement was a mistake.¹³ It is important that the Commission create a regulatory foundation that supports all carriers, encourages investment, and leaves room to accommodate engineering, standards developments and innovation.

IV. Conclusion

The Commission should prevent satellite stakeholders from encroaching on present and future mobile operations within LMDS spectrum bands at competitive carriers' expense. In support of our members providing critical services to unserved and underserved areas, CCA urges the Commission to maintain the FSS operating rules as expressed in the Spectrum Frontiers Report and Order. CCA also requests Commission action on its Petition for Reconsideration.

Sincerely,

/s/ Rebecca Murphy Thompson

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¹³ See Commissioner Pai Statement, Spectrum Frontiers Report & Order, at 2 (stating that the Commission "lack[s] the expertise and authority to dive headlong into this issue, and I don't think *any* agency should take a band-by-band approach to cyber").